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# RINGWORM IN PUBLIC INSTITUTIONS.

EXTRACTED FROM THE  
TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

## ROSACEA.

EXTRACTED FROM THE  
TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

BY

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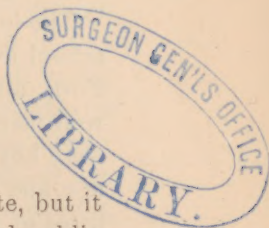
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# RINGWORM IN PUBLIC INSTITUTIONS.

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RINGWORM in ordinary practice is frequently obstinate, but it is decidedly more annoying and vexatious in schools and public institutions. It often occasions an interruption in the education of children, and it also, because of its infectious nature, sometimes prevents their admission into schools. Any error in recognizing it, or a mistake in deciding when it is well, may be the cause of inconvenience and loss to the teacher, of vexation to the parents, and of injury to the physician. It is of the utmost importance for the latter to be able to recognize it, as so much depends upon his decision. These circumstances lend a peculiar interest to the subject.

The division of ringworm into so many different species has confused and discouraged practitioners and students to such an extent as to prevent what is already known from becoming widely disseminated. I shall therefore not consider any of the fine distinctions of the disease, believing it will be decidedly more useful to refer in a general manner to the subject. I shall do this by presenting some of the leading features observed in a recent outbreak in a public institution in the city of Philadelphia.

This establishment is situated in a healthy portion of the city. It has large rooms, provided with proper ventilation, and is most carefully managed by a matron and corps of good nurses. The inmates numbered one hundred children, their ages ranging from two to fifteen years. The matron's attention was first attracted by observing a number of the children engaged in scratching their heads. Thinking they might be infested with pediculi, she called the cases to the attention of the physician in charge, Dr. Thomas Butcher, who kindly requested me to examine them with him. No pediculi were detected. After carefully searching the bodies and heads of three cases submitted for examination,



although the primary changes on the skin were very much masked by the scratching, nevertheless I was inclined to believe that the trouble was ringworm. My diagnosis was fully verified after some of the scales from the patches were placed under the microscope and revealed the fungus peculiar to the disease, the *trichophyton tonsurans*.

The following day the doctor, myself, and assistants divided the school into sections and stripped and examined all the children. Forty-nine cases of ringworm were detected, the appearance being well marked in some, and slight in others. Thirty-two of these were boys, and seventeen girls. The youngest was two years of age, and the eldest was twelve. The disease was severe in thirty-three of the cases, and mild in sixteen. Six cases were complicated with eczema, one had an enormous hydrocephalic head, another Pott's disease of the spine, and still another phimosis with well-marked cicatrices on the right and left side of the neck. The itching and abrasions were first observed in this last case shortly after its admission into the institution. Some portion of the head was involved in forty-one of the cases, the entire body in five, the arms and chest in one, the chest and back in one, and the scalp and face in one. The scalp in the forty-one cases was covered with circular scurfy spots of various dimensions, some being fully developed, while others were in an incipient state. The majority of these meal-like patches had a gray appearance, and were studded over with rubbed-off dry and lustrous hair. Eight of the cases exhibited nothing beyond the appearance of scurfy circumscribed spots, while six had herpetic patches, and were likewise complicated with eczema. A number of the children had two, three, or more spots, and in a few an extensive area of the scalp was diseased. The regions involved were mainly over the parietal, occipital, and mastoid portions of the temporal bones. Several attempts to extract the hairs resulted in breaking them off close to the scalp, and when one was successfully removed it was noticed under a lens to be swollen and opaque. The parasite created more or less itching, which caused them to scratch the scalp, and thus gave rise to abrasions over many of the patches. One of the cases had over the frontal region a circular opaque patch filled with brush-like dull and lifeless hairs of about one line and a half in height; in addition it had extended to the forehead, which was marked by an ill-developed herpetic spot. The bodies of five of them were covered with spots of the same na-

ture as the affection of the scalp, differing only in the peculiar appearance observed on account of occurring on non-hairy parts. The face, neck, back, chest, and extremities in these cases were the seat of linear abrasions that masked very much the true nature of the disease. Upon a careful inspection, however, a red, rough, scaly surface, with here and there circles and semicircles with vesicular edges, could be seen festooned in all directions. The integument was very much altered by scratching in two cases involving the trunk and superior extremities. Small scurfy spots, with well-defined borders and a pale centre, were visible on the arms and chest of one, and the chest and back of the other.

Some of the diseased scales were taken from the scalp of one of the children and inoculated on the back of the same patient, and also upon the thigh of another, with the effect of producing scaly and herpetic-looking patches. These scales from the patches were collected and then soaked in ether to remove the fatty matter, together with a thorough washing, and finally placed in dilute liquor potassa. A few of the diseased hairs were extracted from the child that had been inoculated, and were prepared in a similar manner to the scales. The above-named specimens were placed under separate microscopes of 300 diameters, and in both cases were found to be filled with cell-productive bodies, *conedia* and *mycelium*, or spores and threads, the latter largely predominating. The fibres of the hair were split up by the parasite, giving it a brush-like appearance.

At the same time I scraped some of the scales from the scalp of one of the children, and also from the chest of another, both being severe cases, and applied them to the bodies of two living cats. For three days I was not able to detect any change on the parts on which the scales were placed, but on the beginning of the fourth I detected a small meal-like patch upon one, and on the other the hairs began to fall out. The fifth day the patches attained the characteristic circular form, and the affection continued to spread rapidly, until spots the size of a large coin were almost denuded of hair. Scales from the patches of one of the cats were re-inoculated on a healthy portion of the scalp of one of the children and thigh of another, with the effect of producing the circumscribed spots of ringworm. Two specimens were now prepared, one from the inoculated child, the other from one of the cats, and revealed under the microscope fungi of a luxuriant kind, the threads being present in large quantities. The scales



with which these cats were inoculated were selected from two of the severe cases of the ringworm.

As the threads of the fungi, which are more irritating to the tissues than the spores, were found in large numbers upon microscopical examination, both on the children and on the cats, this will account for the ravages of the disease being so intense. A section of the skin of one of the cats was also made and put under the microscope. The parasite was observed among the scales of the horny layer of the epidermis, in the cutis on the hair shaft, while small abscesses were also to be seen in the rete mucosum and in the hair-follicles. The parasite, however, could not be detected in the subcutaneous cellular tissue. I thought it would be important to examine into the history of the children, and find out why the majority of them furnished such a suitable soil for the growth of the fungi. From the statement of the children and the records of the institution, I was able to obtain the following points in regard to these forty-nine cases. Nineteen were of Irish parentage, ten of American, five of German, one of English father and Irish mother, one of French father and American mother, and thirteen unknown. Twelve had lost both father and mother, twenty-three father, and eight the mother, while six had both father and mother living. The causes of the death of many of the parents were reported, and prominent among these were consumption and intemperance. A large percentage of the parents living were the subjects of chronic disease, were worthless or confirmed drunkards, and were subsisting in some of the charitable institutions, or the almshouse. It was, therefore, evident that many of the children were the offspring of feeble and diseased parents. This fact was also clearly shown by their strumous and lymphatic temperaments. Many of them had large bellies, pegged and notched teeth, conjunctivitis, swollen glands, and scars of old ulceration.

The sixteen children who had the disease mildly had all been recently admitted into the institution. Most of them looked pale, languid, and exhibited evidences of mal-assimilation. Before their entrance into the institution they had no doubt, owing to the circumstances of their parents, received poor and unwholesome food, and probably resided in damp and uncleanly dwellings, surrounded with impure air.

The first great principle observed in the treatment of these patients was strict isolation. They were sent to the fourth floor

of the institution, divided into three parties, and assigned to large, commodious, and well-ventilated rooms. Twenty-six of the cases involving the scalp, were placed in a large room with three nurses; seven involving the body, in another apartment with one nurse; and the sixteen with the mild form in still another room. Every morning and afternoon each section was allowed by themselves one hour's run and play in the large open lawn attached to the institution. During this period the rooms were aired and completely disinfected by burning sulphur in them. The utmost attention was paid to cleanliness. The children were bathed twice a week. The linen was washed separate from that of the other inmates, and changed every few days. Previous to the washing a little carbolic acid was sprinkled over the clothes, and they were then thoroughly boiled. The hats, combs, brushes, towels, and everything in contact with the infected were not permitted to be used by the healthy. Especial attention was given to their diet, which consisted of the most appropriate and highly nutritious articles of food, such as tender meat once a day, milk, homemade bread, rice, hominy, grits, cracked wheat, eggs, with occasionally baked apples and mashed potatoes. The beneficial effects of this kind of diet, together with use of bitter tonics, cod-liver oil, iron, quinine, and fresh air, on the thin and delicate children were soon apparent.

I directed the heads and bodies of all to be well washed each day with castile soap and water, in order to get rid of the greasiness of the skin, so that local remedies might act more effectually. In the first room containing the cases of ringworm of the body, after sponging the surface with a strong solution of vinegar, an ointment was used containing precipitated sulphur one drachm, oxide of zinc ointment one ounce, ammonio-chloride of mercury one scruple, carbolic acid five drops. The continued application of these remedies for about a fortnight completely eradicated the disease in all except two of the children, and they were finally cured about ten days later by substituting sulphurous acid lotion in place of the vinegar.

In the cases involving the head where only one patch was present, the hair was clipped for a distance of about one and one-half inches beyond the diseased area, so as to prevent it from spreading. In those having more than one spot on the scalp, the nurses were instructed to extract a number of the diseased hairs every day until they were all removed. On the heads of



those having pustules, I opened the latter with a knife, and took away all the scales possible. Immediately after the epilation each day, I ordered the following ointment: pyroligneous oil of juniper six drachms, carbolic acid one-half a drachm, lard five ounces. The object of this application was to further assist in loosening the hairs for the epilating process the next day. In the severe cases I used a six ounce alcoholic solution, having in it forty grains of chloride of ammonium, and a half drachm of bichloride of mercury about every five or six days. In the mild cases, in the same manner I brushed lightly over the patches glacial acetic acid. Many of the ill-nourished and lymphatic children were extremely sensitive to both these blistering agents, and I was compelled to dilute the former and substitute dilute acetic acid for the latter, before making the second application. The parts were always soothed afterwards by a poultice or a mild ointment. The scales that had been formed were loosened by oil-dressings, which I then carefully removed, together with some of the diseased hairs. The nurses in all the cases of ringworm of the scalp were ordered every night and morning to rub in thoroughly with a stick covered with a piece of sponge the following: lard six ounces, ammonio-chloride and the red oxide of mercury each one drachm, creasote twenty drops.

I found after the little patients having the ringworm of the scalp had been under the treatment for almost five weeks they showed no signs of improvement. At the beginning of the sixth week I made it a point to be present when the applications were made and the diseased hairs extracted, and I found, much to my surprise, that the ointment was rubbed on by the nurses in a superficial and hurried manner, in order that the task could be quickly completed. The epilation was thought too troublesome, and the moment the child became impatient the process was discontinued. After discovering the negligence of the attendants, I or one of my assistants epilated daily, and was present at each application, so that the remedies would be properly applied. I was soon rewarded by seeing the cases yield to the treatment. The diseased hairs in all, and the eczematous condition in others, began to disappear by degrees; the hair stubbles were no longer visible in the follicles; the patches slowly began to loose the scales and to fill with downy hairs until all the surface became covered. At the beginning of the tenth week I was no longer able to detect the fungus, either by the lens or the microscope.



The most rigid precautions were observed with the healthy children; carbolic acid and sulphur ointment were applied to their heads as a preventive every other day. During the epidemic not one new case occurred among them.

Ringworm owes its origin to a vegetable parasite, the *Trichophyton tonsurans*. It generally commences among those that are improperly cared for, and as it is exceedingly contagious it rapidly spreads to those coming in contact with the infected. The fungus has a predilection for the strumous and debilitated, it flourishes upon them with great luxuriance, especially when the threads predominate. The affection frequently has its origin in the lower animals, and is transmitted from them to children and adults. A number of cases are on record in which it has been communicated directly from cows, calves, oxen, horses, and cats, to individuals and then to other members of the same family. A well-marked example of its direct transmission from a cow to an individual came under my notice in the case of a farmer a short time since who applied for treatment at the Dispensary for Skin Diseases. The experiments I made in the above cases are also an additional strong proof that the fungus can be transmitted from lower animals to children, and from individuals to animals. It has likewise verified the fact that the scales of the scalp are capable of producing by inoculation ringworm on other parts of the body. My observation has also been that when it attacks the body and is not complicated it is easily cured; but when it involves the head it is a most tedious and unmanageable disease, owing to the mischievous influence of the hair. I believe, however, the failure to promptly eradicate the disease in the majority of cases is due to negligence, want of patience, and the inability on the part of nurses and attendants to properly understand the orders of the physician.

In closing this sketch I think it will be important to give some practical points as to the proper manner of preventing and managing ringworm in institutions. In all cases the heads and bodies of children should be carefully searched before their admission, and if a suspicious spot is detected they should be subject to medical examination. The matron or some competent person should examine, every week, the heads of the inmates. In case an outbreak should take place, strict isolation should follow and a separation of the bad from the mild forms, so that the latter may not contract new spots on the healthy surface. The rooms

occupied by the patients, on account of the air containing fungous elements, as has been demonstrated by Fox, should always be thoroughly disinfected by burning sulphur in them. The hair should be cut close to the scalp. Exercise and plenty of fresh air should be allowed. Extreme cleanliness should be enforced, the clothes should be washed separately from those of the healthy, and should be changed frequently. As it generally attacks sickly children, who furnish a most suitable soil for its growth and development, they should in all cases be given a liberal diet, and be built up with bitter tonics—iron, quinine, and cod-liver oil. It will be found that these agents will be of practical importance in assisting to cure the disease. The diseased hairs should be extracted, as they are no longer of service, and never will be. The remedies should be effectually applied so they will be able to penetrate into the follicles, and thus destroy the fungi below the surface. The heads of the non-infected should be greased or oiled every day to prevent the dissemination of the fungus.

No case should ever be pronounced well and incapable of conveying the disease until the scurfy condition and all the stumps of broken-off hairs have entirely disappeared, and the parasite cannot be detected either by a powerful lens or the microscope.

Finally, as soon as the children are pronounced cured, the room should be whitewashed or papered, and painted, in order to destroy all traces of the parasite and prevent it from breaking out afresh.



# ROSACEA.

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OF PHILADELPHIA.

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THIS affection of the skin is also known as *acne rosacea*, *gutta rosacea*, and *euperoa*. It is described by some authors as one of the varieties of *acne*, and by others as a separate and distinct disease. As the bloodvessels and dermal connective tissue are primarily the seat of the disorder, and as the glands only become involved secondarily, the latter view seems to me the more philosophical.

Rosacea is a chronic inflammatory disease of a portion of the face, characterized by vivid redness due to an enlargement of the capillary bloodvessels, and later, by hypertrophy of the subcutaneous cellular tissue. It may present three stages: the congestive, varicose, and hypertrophic. The first consists in a reddened state of the nose, at times the same condition existing on the cheeks. It is more common for it to occur alone upon the nose, but it may also be found occasionally isolated on the cheeks or forehead. The redness may either be uniformly distributed over the part involved, or it may be made up of small patches having normal skin between them. The disease usually begins in the form of spots, and so it will spread until the most prominent portion of the face is covered by a diffuse redness which, when exposed to the cold, assumes a livid tint. Sometimes, owing to the excessive vascularity of the part, the sebaceous glands are excited and rapidly accumulate and discharge oily sebum. The nose will then have in addition to the redness an oily and shining aspect. The progress of the disease in the majority of cases is very slow, often requiring months and even years for its development. It occasionally, however, runs rapidly through its different stages, this being generally due to the condition of the system and the violence of the exciting cause.

It may continue in the first stage for an indefinite period, but it is more frequently succeeded by the next, in which small capillary blood-vessels appear upon the surface. The skin now remains con-

stantly injected, and the superficial vessels become tortuous and varicose. The vessels may be fine or thick in calibre, and usually run in an irregular manner. The integument thickens, and as the disease encroaches upon the glands it causes inflammation, suppuration, and the formation of scattered papules and pustules. The rupture of the pustules, which frequently occurs in this stage, gives rise to well-defined scars, very much like those of smallpox. The habitually injected skin, covered with papules or pustules, and the enlarged features cause great mental distress, especially to the fair sex. The disease which has thus far only involved the nose may now extend to the cheeks, forehead, chin, and at last cover the whole face.

The redness may no longer remain uniform, but it may become livid in hue where there are papules and pustules. The skin in this stage will often become rough and granulated, giving to the patient a very repulsive appearance. The second stage, like the first, is usually very slow in its development, and the affection may not pass beyond it.

The morbid action may, however, in some rare cases still continue, more especially in men, until the subcutaneous cellular tissue undergoes excessive hypertrophy, and the glands and bloodvessels become distended and enlarged. Tubercular elevations or a lobulated condition may also appear—more commonly on the nose, owing to the thickening and hypertrophy of the parts. These changes constitute the third stage of the disease. They seriously alter the appearance of the countenance.

Rosacea is met with in both sexes, but is more frequently developed in men. It may happen in youth, but it appears mostly in middle or advanced life. In women it may occur about the age of puberty, during menstrual disorders, and at the cessation of the menses. The local application of cosmetics, paints, and irritating lotions are immediate causes of it. I have found these preparations to be active factors in the production of the disease in both men and women in the theatrical profession, and in women in the decline of life. Among other of the prominent causes are excesses of the table leading to dyspepsia, chronic affection of the stomach and intestines, morbid conditions of the liver, and want of cleanliness. The attitude made necessary by certain occupations which cause an increased flow of blood to the face are also efficient causes. Thus we see it originating in bakers, engineers, etc., who are compelled to work with their faces in proximity to hot fires. The habitual use of vinous, spirituous, and malt liquors are common sources of rosacea. The powerful action of these liquors in producing increased facial circulation, leading to a hideously swollen condition of the



nose, can be observed daily. These deformities are commonly known as "grog-blossoms," "brandy nose," and the "wine nose." Fluellen's allusion, in Shakspeare's *King Henry V.*, to Bardolph's countenance aptly expresses in the following words the true appearance of rosacea: "His face is all bubukles, and wheeks, and knobs, and flames of fire; and his lips plows at his nose, and it is like a coal of fire, sometimes plue and sometimes red." Frequent exposure to cold winds also often provokes rosacea. In a few cases it is impossible to attribute the disease to any external or internal influences.

Rosacea can easily be distinguished from other diseases by its history, course, and the alterations in the skin. It may, however, be confounded with either a syphiloderma or lupus. Such an error should not occur; but as it occasionally does, I will give the following diagnostic points between these affections: Syphilis is attended by a history: it is preceded by fever, prostration, sore-throat, and the roseolous rash. Tubercles and pustules do not involve the glands in syphilis; they are rarely developed alone on the face, but when they happen so exclusively they have a dull coppery color, and may be complicated with fissures. In rosacea there is no syphilitic history, nor any of the concomitants of specific disease as a rule, and the color of the patches is a vivid red. The pustules and tubercles are of a bright tint, and have their seat in the glands of the face. In lupus erythematosus the surface of the diseased patches is covered with fine yellowish scales. In lupus vulgaris the tubercles enlarge slowly, and end in ulceration and the formation of cicatrices. In rosacea no scales are present; the part is covered with varicose bloodvessels; the tubercles never ulcerate, and no attempt is made at the formation of cicatrices.

With these preliminary descriptive remarks, I will now report the following typical cases, occurring under my care at the Pennsylvania Free Dispensary for Skin Diseases.

CASE I.—Mrs. S., a large, fleshy woman, aged 43 years, the mother of three children, first came to the Dispensary early in November, 1877. She complained of an eruption of the nose and cheeks that disfigured her appearance, and gave rise to a disagreeable burning and itching sensation. Upon examination, the tip and root of the nose and both cheeks were found to be the seat of permanent red patches covered with papules, pustules, and tubercles. The papules and tubercles were only present in limited numbers, the latter being mainly due to the budding out of the thickened integument; while small acuminate pustules studded the surface. Here and there a livid tint and depressions were apparent where the pustules had

disappeared. Between the tip and root of the nose was a small spot of sound skin. Numerous capillary bloodvessels, so dilated and enlarged that they were visible to the naked eye, were interlaced in all directions on the tip and alae of the nose. Some of these cutaneous bloodvessels were long and very fine, while others were short and thick. This abnormal condition of the skin had enlarged the features and altered the expression to such an extent as to cause the patient great distress of mind. The countenance had assumed such a disagreeable aspect that she would no longer go to meals with other members of the family, and she always wore a veil, both while at home and in the street, to cover the hideous deformity made by the disease. The patient stated that she had first noticed the disease about five years previous in the form of a little red patch on the tip of the nose. This spot had remained stationary for about a year, during which time she had rapidly increased in flesh. The affection had then extended gradually from both sides of the nose to the cheeks, and had remained simply as this diffuse redness until about eighteen months ago, when the present condition began to slowly make its appearance. At this time the patient was suffering with marked dyspnoea, pain in back, palpitation, loss of appetite, and a constipated condition of the bowels. On a careful examination I detected congestion of the neck of the uterus, and a well-marked ulcer on the anterior lip. The heart and stomach disorders were only functional, and the lungs and liver were normal. The abdomen was unusually large and pendulous from the immense deposit of fat. The facial congestion was no doubt excited by reflected irritation from the uterus, and aggravated by disturbed digestion and the rapid increase of fat. A section taken from the nose for microscopical examination showed just a vestige of the horny layer of the epidermis, while the mucous layer was very thick. The papillae were very much enlarged and the bloodvessels were markedly dilated and varicose. The subcutaneous cellular tissue was hypertrophied, and the sebaceous glands degenerated by the pressure of the surrounding tissue upon them.

In the first place the treatment was as follows: open air exercise and a simple diet were ordered. The general health was improved by ferruginous preparations. Pepsin, bismuth, and strychnia in small doses were given. The uterine difficulty received the proper attention, and under various local applications slowly yielded to treatment. The bowels were regulated by saline aperients, and the prominent abdominal protrusion, in addition to the palpitation of the heart, was relieved by an abdominal elastic support. This plan of treatment proved effectual in removing not only the sense of dis-



comfort from imperfect digestion, but also the dyspnœa and pain in the back.

Locally I made punctures over the patches with the needle-knife twice a week. This knife has the appearance of a fine needle, except that its extremity is spear-shaped. At each sitting I would rapidly open the pustules, and incise all the tubercles and the red-denied patches. During the first few applications the blackened blood, pus, and broken-down sebum came very slowly to the surface, but after repeated puncturing the blood by degrees assumed its normal color. I always, while making the incisions, sponged the parts well with warm water, and allowed it to bleed freely. This method stimulated the action of the absorbents by lessening the circulation in the parts, and thus removed the excessive hypertrophy. After each application the benzoated oxide of zinc ointment, rubbed up with a sufficient quantity of olive oil to make it soft, was painted over the part with a camel's-hair brush. A mild astringent lotion, consisting of the sulphate of zinc and the acetate of lead, each eighty grains, to four ounces of rose-water, was ordered; a teaspoonful of this was added to a cup of water, and the parts were bathed with it every night. Gradually the pustules and tubercles became less in number, and at the end of the fourth month they had entirely disappeared. The same local treatment was still continued, and I was soon rewarded by seeing the patches become lighter in color, followed by intervening spots of normal skin. The patches slowly lost their outlines, the redness entirely disappeared, and I discharged my patient cured about the middle of March of the present year.

CASE II.—Mr. L., a peddler, native of Jerusalem, came under my care in October, 1877. I present his portrait, which was made by the artist of the Dispensary, Mr. H. F. Praeger. It represents faithfully his features as they existed at that time. He had previously been treated in hospitals and dispensaries, both in Europe and America, without being in the least benefited. When I first saw the case the nose and cheeks were the seat of patchy redness, the integument being rough, unequal, and covered with dilated capillaries, tubercles, and pustules. Violet-red patches with indolent tubercles and pustules were also to be seen on the chin, above the left eye, and on the left temple. The nose and cheeks had a shining and greasy appearance which was very annoying to the patient. The hairs of the beard were short and very oily, and sparsely distributed over the face. The tumefied and injected skin, with the tubercles, pustules, and dilated bloodvessels scattered over its surface, caused the features to have a swollen and highly disagreeable

aspect. On examination I found the tongue large and flabby; an uneasy feeling existed in the stomach after meals, followed by flatulence and acid eructations, the bowels being generally constipated. The glands in different parts of the body were enlarged, the skin was soft, flabby, had a yellowish tinge, and displayed old scars of former disease. He gave, however, no history of syphilis. All his children showed evidence of unhealthy constitutions: one was anæmic and had granular conjunctivitis, while the other had discharges from the ears, and enlargement of the lymphatics of the neck. The whole aspect of the patient, together with the appearance of his children, pointed to struma. It is probable that the constant exposure to the weather, owing to his occupation, developed the disease, and that it was materially influenced by deranged digestion, and a tuberculous constitution. The patient stated that the disease had commenced by a little red spot on the tip of the nose, seven years previous to coming under observation, while he was in Jerusalem, and that it had remained without any change for two years; the third year afterwards, while peddling in London, during severe weather, it began to spread, and the tubercles and pustules made their appearance. After coming to this country the disease became worse, and he received treatment from different physicians without benefit, until he presented himself at the dispensary. A microscopical examination of a section of one of the patches revealed similar alterations in the different layers of the skin to those described in the previous case, except that the hypertrophic growth was more marked. The horny layer was scarcely apparent, the mucous layer was dense, the derma was excessively enlarged, and the bloodvessels were varicose. Many of the glands were the seat of suppuration. The treatment instituted included both general and local means. The general treatment consisted in avoiding cold winds, attention to diet, habits, and general hygiene. A mixture containing a bitter tonic with a mineral acid and pepsin was given half an hour before meals until the dyspeptic symptoms had disappeared, when I ordered at different periods cod-liver oil, iodide of iron, and the phosphates of lime and iron. Learning that he had previously been treated locally by applications of sulphur, corrosive chloride of mercury, tar, green soaps and caustic potassa solution without any advantage, I at once began using the needle-knife over the surface with marked benefit. I punctured all the surface, using the local applications just as in the previous case. In a little less than seven months the disease had entirely disappeared.

I desire in concluding this paper to call especial attention to two similar methods of local treatment in rosacea, and their marked dif-



ference from the one I have just described. The first I shall refer to was described by Prof. Von Hebra in the *Wein. Med. Wochenschrift* for January, 1878. In this article he suggests the use of an instrument in acne rosacea made after the form of a lancet needle, with cutting edges on both sides, and provided with a stop so it may not penetrate too deeply into the derma. He adds that the perpendicular punctures are made for the purpose of destroying the bloodvessels, and that the bleeding can be easily arrested by compressed wadding. In addition to the above-named instrument, which has been used successfully by Prof. Von Hebra in acne rosacea, another has been invented by Mr. Balmanno Squire, of London, called the multiple scarifier. It consists of a number of needles attached to a handle, and arranged parallel to one another with a curved shield on either side. Mr. Squire maps out the diseased patches with a solution of black sealing wax, freezing the surface with an ether spray, and then applies the multiple scarifier. Should the scarifier be too broad for some of the smaller patches he advises that they be operated on at a subsequent sitting with a single scalpel. He also states that the bleeding, which may be copious, may be immediately arrested by pressure with the fingers, a layer of wet blotting-paper being interposed between the fingers and the skin pressed upon.

I have briefly described the instruments recommended by these distinguished gentlemen in order to prevent confounding the purpose they set forth, with the object of the method I have alluded to in this paper.

I make no application to deaden the pain before the operation, for I believe it always tends to increase the congestion of the part. In using the needle-knife I allow the point to penetrate to various depths, according to the thickened condition of the integument. In some points of the diseased patch, simply erythema may be present, while in others delicate capillaries, tubercles, and excessive hypertrophy may exist; consequently the former will necessitate very slight punctures, while the latter will require deeper incisions according to the hypertrophic growth. In this manner I reach all the larger and smaller patches.

During the operation I hold the needle-knife in the right hand and rapidly apply it to the parts, while with the left I sponge the surface with warm water in order that it may bleed freely. By sponging the surface, the poured-out blood will be absorbed, and will not, therefore, obscure the operation. It will also prevent the blood from clotting in the incisions and arresting its flow. I aim not to obliterate the capillaries, but to relieve the congestion and

stagnation of blood in the vessels, to enlarge and equalize the circulation, and to awaken the action of the absorbents so that the deposits may be carried off.

It will be seen that the method I have employed differs materially from both that have been recommended by Von Hebra and Squire. I have treated rosacea in the past most unsatisfactorily with soaps, tar, sulphur, and other stimulating applications, without in the least benefiting my patients. Feeling that my efforts were of no avail, I adopted the plan of relieving the engorged capillaries and then soothing the hyperæmic skin. I have in this manner obtained quite a number of remarkably good results during the past two years.

In obstinate cases, in addition to the copious blood-letting, the cure is often facilitated by brushing collodion lightly over the surface; it frequently splints the vessels and thus lessens their calibre. The vapor bath is likewise of great assistance in hastening the absorption of the tubercles and rendering the skin soft and smooth. If these applications are persevered with in rosacea, it will be found that they will be attended with the happiest consequences in the form of diminution, and finally disappearance of the redness and hypertrophic growth.





